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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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COZEN O' CONNOR, P.C..
1900 MARKET STREET
PHILADELPHIA, PA 19103-3508

EXAMINER	
RAWLINGS, STEPHEN L	

ART UNIT	PAPER NUMBER
1643	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/656,895	WALDMAN ET AL.	
	Examiner	Art Unit	
	Stephen L. Rawlings, Ph.D.	1643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 October 2005*.

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-55* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-55* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The amendment filed October 14, 2005, is acknowledged and has been entered.

2. Claims 1-55 are pending in the application and are currently subject to restriction.

Election/Restrictions

3. Restriction to one of the following inventions is required under 35 U.S.C. 121:

Group I. Claims 2, 5, and 7-10, drawn to an *in vitro* method for determining whether or not an individual has metastasized colorectal cancer cells and a method for determining whether or not a tumor cell is a colorectal tumor cell, said methods comprising determining the presence of a CRCA-1 translation product using an immunoassay, classified, for example, in class 435, subclass 7.23.

Group II. Claims 3, 6, 11, and 12, drawn to an *in vitro* method for determining whether or not an individual has metastasized colorectal cancer cells and a method for determining whether or not a tumor cell is a colorectal tumor cell, said methods comprising determining the presence of a CRCA-1 transcription product using polymerase chain reaction (PCR) to amplify the product, classified, for example, in class 435, subclass 6.

Group III. Claims 13-16, drawn to drawn to a kit comprising antibodies specific for a CRCA-1 translation product, classified, for example, in class 530, subclass 387.7.

Group IV. Claim 17, drawn to drawn to a kit comprising PCR primers that specifically amplify a CRCA-1 transcription product or cDNA generated therefrom, classified, for example, in class 536, subclass 24.33.

Groups V. Claims 18, 19, and 53, insofar as the claims are drawn to a protein having an amino acid sequence selected from the group consisting of SEQ ID NOs: 2-81, or a fragment thereof, and a vaccine comprising at least one epitope of said protein, classified, for example, in class 530, subclass 300.

Groups VI. Claims 20 and 21, drawn to an antibody that binds an epitope of a protein having an amino acid sequence selected from the group consisting of SEQ ID NOs: 2-81, classified, for example, in class 530, subclass 387.9.

Group VII. Claims 22-38 and 53, insofar as the claims are drawn to a nucleic acid molecule comprising the polynucleotide sequence of SEQ ID NO: 1 and encoding a protein having an amino acid sequence selected from the group consisting of SEQ ID NOs: 2-81, a fragment thereof, an oligonucleotide comprising a nucleotide sequence complementary to said fragment, an expression vector comprising said nucleic acid molecule, a host cell comprising said vector, and a vaccine comprising a nucleic acid molecule encoding a protein having an amino acid sequence selected from the group consisting of SEQ ID NOs: 2-81, classified, for example, in class 536, subclass 23.5, class 435, subclass 320.1, and class 435, subclass 325.

Group VIII. Claims 39-47, drawn to a conjugated compound comprising a CRCA-1 translation product binding moiety, and a composition comprising said compound, classified, for example, in class 530, subclass 391.7.

Group IX. Claims 48, 50, and 51, drawn to a method for treating or preventing colorectal cancer comprising administering to an individual a composition comprising a conjugated compound comprising a CRCA-1 translation product binding moiety, classified, for example, in class 424, subclass 181.1.

Group X. Claim 49, drawn to a method for radioimaging metastasized colorectal cancer cells comprising administering to an individual a composition comprising a conjugated compound comprising a CRCA-1 translation product binding moiety, classified, for example, in class 424, subclass 1.37.

Group XI. Claim 52, drawn to a method of delivery of a nucleic acid molecule to intestinal tract cells of an individual comprising administering to the individual a composition comprising a CRCA-1 translation product ligand and a nucleic acid molecule, classified, for example, in class 530, subclass 178.1.

Group XII. Claims 54 and 55, insofar as the claims are drawn to a method for treating or preventing metastasized colorectal cancer in an individual comprising administering to the individual a vaccine comprising at least an epitope of a protein having an amino acid sequence selected from the group consisting of SEQ ID NOs: 2-81, classified, for example, in class 424, subclass 277.1.

Groups XIII. Claims 54 and 55, insofar as the claims are drawn to a method for treating or preventing metastasized colorectal cancer in an individual comprising administering to the individual a vaccine comprising a nucleic acid molecule encoding a protein having an amino acid sequence selected from the group consisting of SEQ ID NOs: 2-81, classified, for example, in class 514, subclass 44.

4. Claims 1 and 4 are linking claims, linking the inventions of Groups I and II. The restriction requirement among the linked inventions is subject to the nonallowance of the linking claim(s). Upon the allowance of the linking claim(s), the restriction requirement as to the linked inventions shall be withdrawn and any claim depending from or otherwise including all the limitations of the allowable linking claims will be entitled to examination in the instant application. Applicants are advised that if any such claims depending from or including all the limitations of the allowable linking claims are

presented in a continuation or divisional application, the claims of the continuation or divisional application may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Where a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

5. The inventions are distinct, each from the other because of the following reasons:

The inventions of Groups III-VIII are products, whereas the inventions of Groups I, II, and IX-XIII are processes.

The inventions of Groups III and IV and the inventions of Groups I, II, and IX-XIII are unrelated because the products of Groups III and IV are not specifically used or otherwise involved in the processes of Groups I, II, and IX-XIII.

The inventions of Group V and the inventions of Groups I, II, IX-XI, and XIII are unrelated because the products of Group V are not specifically used or otherwise involved in the processes of Groups I, II, IX-XI, and XIII.

The inventions of Group VI and the inventions of Groups II and IX-XIII are unrelated because the products of Group VI are not specifically used or otherwise involved in the processes of Groups II and IX-XIII.

The inventions of Group VII and the inventions of Groups I and IX-XII are unrelated because the products of Group VII are not specifically used or otherwise involved in the processes of Groups I and IX-XII.

The inventions of Group VIII and the inventions of Groups I, II, XII, and XIII are unrelated because the products of Group VIII are not specifically used or otherwise involved in the processes of Groups I, II, XII, and XIII.

The inventions of Group V and the inventions of Group XII are related as products and processes of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can

be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the product as claimed, namely the composition comprising at least a fragment of a protein can be used in a materially different process of using that product, such as the process of using the composition as an immunogen to produce an antibody that binds to the protein.

The inventions of Groups V and XII have acquired a separate status in the art, as evidenced by their different classifications and/or art-recognized divergence in subject matter, and the search performed in examining claims drawn to a product is a different from the search performed in examining claims drawn to a process using that product. Apart from the searching patent databases using the patent classification of the claimed subject matter, a thorough search of the technical literature is particularly pertinent, and since such a search is performed by a series of key word queries of relevant databases, each search would be performed using a different set or series of key words. Therefore, the search and considerations necessary in examining the merit of claims of Group V would not suffice to provide adequate information regarding the merit of the claims of Group XII, and vice versa, since the searches are not the same, nor are they one coextensive in scope and nature. Because different searches would have to be performed to examine the inventions of Groups V and XII, an examination of both would constitute a serious burden.

Since the inventions of Groups V and XII have been shown to be patentably distinct, and because the examination of both inventions could not be made without serious burden, it is proper to restrict each from the other. See MPEP § 803.

The inventions of Group VI and the inventions of Group I are related as products and processes of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the product as claimed, namely the antibody can be used in a materially

different process of using that product, such as the process of using the antibody that binds to the protein as a means to purify the protein by affinity chromatography.

The inventions of Groups VI and I have acquired a separate status in the art, as evidenced by their different classifications and/or art-recognized divergence in subject matter, and the search performed in examining claims drawn to a product is a different from the search performed in examining claims drawn to a process using that product. Apart from the searching patent databases using the patent classification of the claimed subject matter, a thorough search of the technical literature is particularly pertinent, and since such a search is performed by a series of key word queries of relevant databases, each search would be performed using a different set or series of key words. Therefore, the search and considerations necessary in examining the merit of claims of Group VI would not suffice to provide adequate information regarding the merit of the claims of Group I, and vice versa, since the searches are not the same, nor are they one coextensive in scope and nature. Because different searches would have to be performed to examine the inventions of Groups VI and I, an examination of both would constitute a serious burden.

Since the inventions of Groups VI and I have been shown to be patentably distinct, and because the examination of both inventions could not be made without serious burden, it is proper to restrict each from the other. See MPEP § 803.

The inventions of Group VII and the inventions of Groups II and XIII are related as products and processes of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the product as claimed, namely the composition comprising a nucleic acid molecule or a primer can be used in a materially different process of using that product, such as the process of using the composition to produce a protein encoded thereby, or the process of using the primer as a probe to determine the copy number of a gene to which it hybridizes by Southern blot analysis.

The inventions of Groups VII and the inventions of Groups II and XIII have acquired a separate status in the art, as evidenced by their different classifications and/or art-recognized divergence in subject matter, and the search performed in examining claims drawn to a product is a different from the search performed in examining claims drawn to a process using that product. Apart from the searching patent databases using the patent classification of the claimed subject matter, a thorough search of the technical literature is particularly pertinent, and since such a search is performed by a series of key word queries of relevant databases, each search would be performed using a different set or series of key words. Therefore, the search and considerations necessary in examining the merit of claims directed to the inventions of Group VII would not suffice to provide adequate information regarding the merit of the claims directed to either of the inventions of any of Groups II and XIII, and vice versa, since the searches are not the same, nor are they one coextensive in scope and nature. Because different searches would have to be performed to examine the inventions of Groups VII and the inventions of any of Groups II and XIII, an examination of both would constitute a serious burden.

Since the inventions of Groups VII and the inventions of any of Groups II and XIII have been shown to be patentably distinct, and because the examination of more than one inventions could not be made without serious burden, it is proper to restrict each from the other. See MPEP § 803.

The inventions of Group VIII and the inventions of Groups IX-XI are related as products and processes of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the product as claimed, namely the composition comprising a conjugate comprising a CRCA-1 translation product binding moiety can be used in a materially different process of using that product, such as the process of using the composition as an immunogen to produce an antibody that binds to the conjugate.

The inventions of Groups VIII and the inventions of Groups IX-XI have acquired a separate status in the art, as evidenced by their different classifications and/or art-recognized divergence in subject matter, and the search performed in examining claims drawn to a product is a different from the search performed in examining claims drawn to a process using that product. Apart from the searching patent databases using the patent classification of the claimed subject matter, a thorough search of the technical literature is particularly pertinent, and since such a search is performed by a series of key word queries of relevant databases, each search would be performed using a different set or series of key words. Therefore, the search and considerations necessary in examining the merit of claims directed to the inventions of Group VIII would not suffice to provide adequate information regarding the merit of the claims directed to the inventions of any of Groups IX-XI, and vice versa, since the searches are not the same, nor are they one coextensive in scope and nature. Because different searches would have to be performed to examine the inventions of Groups VIII and the inventions of any of Groups IX-XI, an examination of both would constitute a serious burden.

Since the inventions of Groups VIII and the inventions of any of Groups IX-XI have been shown to be patentably distinct, and because the examination of both inventions could not be made without serious burden, it is proper to restrict each from the other. See MPEP § 803.

The inventions of Groups III-VIII are patentably distinct products for the following reasons:

The inventions of Groups III are kits comprising antibodies, whereas the inventions of Groups IV are kits comprising primers (i.e., relatively short nucleic acid molecules that hybridize other nucleic acid molecules). The inventions of Groups V are proteins, or fragments thereof. The inventions of Groups VI are antibodies that bind such proteins; the inventions of Group VII are nucleic acid molecules, or fragments thereof, that encode such proteins; and the inventions of Group VIII are conjugates comprising a binding moiety.

Polypeptides and polynucleotides, including primers, for example, are chemically distinct products, since polypeptides are composed of polymers of amino acids, whereas polynucleotides are composed of polymers of nucleotides. Any relationship between a polynucleotide and a polypeptide is dependent upon the information provided by the nucleotide sequence of the polynucleotide, as it corresponds to an "open reading frame" encoding the amino acid sequence of the polypeptide. However, a polypeptide can be produced by means, other than the recombinant means by which a polynucleotide encoding a polypeptide might be used to produce the polypeptide, since a polypeptide can be produced (or isolated) by biochemical means, including, for example, affinity chromatography. In addition, while the polynucleotide might encode the polypeptide, generally, it can also encode another polypeptide using the information provided by an alternative open reading frame; and furthermore, since a polynucleotide can be used as a probe in hybridization-based analyses, the information provided by a polynucleotide can be used isolate different polynucleotides encoding polypeptides, which have amino acid sequences that differ from the amino acid sequence encoded by the disclosed polynucleotide. Consequently, the disclosed relationship between a polynucleotide capable of encoding a polypeptide and the polypeptide is not exclusive, since either the claimed polynucleotide or the claimed polypeptide can also be related to other polynucleotides or polypeptides, which are materially and chemically different from the claimed inventions. Therefore, the inventions of Group IV or VII and the inventions of Groups V are patentably distinct products.

The inventions of Group IV or VII and the inventions of Groups V have acquired a separate status in the art, as evidenced by their different classifications, and the search performed in examining claims drawn to a polynucleotide is a different from the search performed in examining claims drawn to a polypeptide. Apart from the searching patent databases using the patent classification of the claimed subject matter, a thorough search of the technical literature is particularly pertinent, and since such a search is performed by a series of key word queries of relevant databases, each search would be performed using a different set or series of key words. Therefore, the search and

considerations necessary in examining the merit of claims directed to the inventions of Group IV or VII would not suffice to provide adequate information regarding the merit of the claims of Group V, and vice versa, since the searches are not the same, nor are they one coextensive in scope and nature. Because different searches would have to be performed to examine the inventions of Group IV or VII and the inventions of Groups V, an examination of both would constitute a serious burden. Moreover, because the disclosed relationship between the polynucleotide and the polypeptide encoded by the polynucleotide is not absolute or exclusive of other relationships with different polynucleotides or polypeptides, the search of either group will likely provide information that is relevant to one but not the other; and as such, searching one in addition to the other would be unduly burdensome.

Since the inventions of Group IV or VII and the inventions of Groups V are patentably distinct from the other and because the examination of both could not be made without serious burden, it is proper to restrict one from the other. See MPEP § 803.

The claimed proteins or polypeptides and the claimed antibodies are patentably distinct inventions. An antibody, such as an immunoglobulin G (IgG) molecule, typically comprises four polypeptides: two light chains and two heavy chains, each containing constant and variable regions, which interact with one another to form an antigen-binding domain comprised of amino acid residues in each chain. In contrast, the CRCA-1 translation product is disclosed as consisting of a single polypeptide chain; so the inventions of Groups III or VI and the inventions of Group V are structurally distinct from one another. Thus, any relationship between an antibody and a polypeptide to which the antibody binds is codependent upon the structural (i.e., antigenic) information provided by the polypeptide, which is recognized as the antigenic determinant to which the antibody binds, and the selective binding nature of the antigen-binding domain of the antibody. However, a polypeptide comprises multiple antigenic determinants and can thus elicit the production of multiple different antibodies, which recognize and bind structurally distinct portions (i.e., epitopes) of the polypeptide. Furthermore, an antibody

is capable of recognizing and binding antigenic determinants that are shared by polypeptides, which are otherwise structurally and/or functionally distinct from the claimed polypeptide to which it binds (e.g., a human protein's mouse homolog, or a different member of a functionally related family of proteins). Consequently, the disclosed relationship between an antibody that binds a polypeptide and the polypeptide is not exclusive, since either the claimed antibody or the claimed polypeptide can also be related to other polypeptides or antibodies, respectively, which are materially and chemically different from the claimed inventions. Therefore, the inventions of Groups III or VI and the inventions of Group V are patentably distinct products.

Searching the claims directed to either the inventions of Groups III or VI and the inventions of Group V would be unduly burdensome, because the inventions have acquired a separate status in the arts, as evidenced by their separate classifications, and moreover because the necessary searches are not the same, nor are they coextensive in nature and scope with one another. A search of relevant sequence databases using the entire amino acid sequence of the polypeptide as query is necessary for the determination of the novelty and unobviousness of the polypeptide. However, such a search is not necessary, or sufficient to identify antibodies that bind the polypeptide, since antibodies that bind an epitope of the polypeptide may be known, even if the polypeptide is not (e.g., a anti-phosphotyrosine antibody binds a phosphotyrosine epitope, which is shared by numerous different proteins, and which would bind a novel tyrosine phosphorylated polypeptide). Accordingly, a thorough search of the technical literature is particularly pertinent, and since such a search is performed by a series of key word queries of relevant databases, each search would be performed using a different set or series of key words. Therefore, having to search the inventions of Groups III or VI and the inventions of Group V would constitute a serious burden.

Since the inventions of Groups III or VI and the inventions of Group V are patentably distinct from the other and because the examination of both could not be made without serious burden, it is proper to restrict one from the other. See MPEP § 803.

The inventions of Groups III or VI and the inventions of Groups IV or VII are patentably distinct because a polynucleotide and an antibody are chemically distinct molecules, since a polynucleotide is composed of polymers of nucleotides, whereas antibodies are composed of polymers of amino acids. Any relationship between a polynucleotide and a polypeptide is dependent upon the information provided by the nucleotide sequence of the polynucleotide, as it corresponds to an "open reading frame" encoding the amino acid sequence of the polypeptide. However, the claimed polynucleotide does not encode a polypeptide chain of the claimed antibody; and the claimed antibody cannot be encoded by the claimed polynucleotide. Therefore, the inventions of Groups III or VI and the inventions of Groups IV or VII are patentably distinct products.

Searching the claims directed to the inventions of Groups III or VI and the inventions of Groups IV or VII would be unduly burdensome, because the inventions have acquired a separate status in the arts, as evidenced by their separate classifications, and moreover because the necessary searches are not the same, nor are they coextensive in nature and scope with one another. Therefore, having to search claims directed to the inventions of Groups III or VI and the inventions of Groups IV or VII would constitute a serious burden.

Since the inventions of Groups III or VI and the inventions of Groups IV or VII are patentably distinct from the other and because the examination of both could not be made without serious burden, it is proper to restrict one from the other. See MPEP § 803.

Regarding the inventions of Group VIII, because the binding moieties to which the claims are directed have only been described in terms of their function, as opposed to their structures, the binding moieties are not necessarily antibodies that bind a CRCA-1 translation product, but rather include any molecule (e.g., a peptide) having such a function. Accordingly, it is reasonably held that the inventions of Group VIII are patentably distinct from the inventions of Groups III-VII.

Given the variable nature of the subject matter of Group VIII, a search of claims directed to such subject matter is not the same, nor is it coextensive with the search required to examine claims directed to any of the other inventions. Furthermore, the inventions of Groups VIII and any of the inventions of Groups III-VII have acquired a separate status in the art, as evidenced by their different classifications and/or art-recognized divergence in subject matter. Because different searches would have to be performed to examine claims directed to the inventions of Groups III and the inventions of any of Groups III-VII, an examination of both would constitute a serious burden.

Since the inventions of Groups III and the inventions of any of Groups III-VII have been shown to be patentably distinct, and because the examination of both inventions could not be made without serious burden, it is proper to restrict each from the other. See MPEP § 803.

The inventions of Groups I, II, and IX-XIII are unrelated, or are otherwise patentably distinct processes for the following reasons:

The inventions of Groups I and II are *in vitro* methods for determining whether or not an individual has metastasized colorectal cancer. The inventions of Groups IX, XII, and XIII are methods for treating or preventing colorectal cancer. The inventions of Group X are methods for imaging colorectal cancer cells; and the invention of Group XI are methods of delivery of a nucleic acid molecule to intestinal tract cells.

Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects. See MPEP §§ 806.04 and 808.01. The instant specification does not appear to disclose that any of the inventions of Groups I, II, and IX-XIII are useable together. The inventions have different purposes or objectives, or otherwise they are materially different processes comprising different process steps that share the same purpose or objective, but which achieve that purpose or objective by different means having different modes of action. Therefore, the inventions appear unrelated.

If not unrelated, the inventions of Groups I, II, and IX-XIII are patentably distinct, each from the others, for the following reasons:

Again, the inventions of Groups I and II, the inventions of Groups IX, XII, and XIII, the inventions of Group X, and the inventions of Group XI have different purposes or objectives.

In addition, the inventions of Groups I, II, and IX-XIII are materially different processes comprising different process steps. For example, despite sharing the same purpose or objective, the inventions of Group I comprise an immunoassay, whereas the inventions of Group II comprise a PCR. The inventions of Groups IX, XII, and XIII, although each is a process for treating or preventing disease, comprise administering to an individual different therapeutic or prophylactic agents. The inventions of Group IX comprise administering a conjugated compound comprising a binding moiety. The inventions of Group XII comprise administering a protein or fragment thereof; and the inventions of Group XIII comprise administering a nucleic acid molecule. For the reasons explained in greater detail above, these different products are patentably distinct, each from the others. Furthermore, regardless of their objective, the inventions of Groups I, II, and IX-XIII involve the measurement of different endpoints and therefore involve the establishment of different correlations. For example, the practice of the inventions of Group XI involves the measurement of the delivery of a nucleic acid to certain cells within the body, though not necessarily cancer cells; and in contrast, practicing any of the methods of Groups IX, XII, and XIII necessarily involves the determination of the therapeutic or prophylactic effect that is achieved. For this reason, the inventions have notably different criteria for success.

Because the inventions of Groups I, II, and IX-XIII are distinct for these reasons, the search required to examine claims directed to any one of these inventions is not the same, nor is it coextensive with the search required to examine claims directed to any other. Furthermore, the inventions of Groups I, II, and IX-XIII have acquired a separate status in the art, as evidenced by their different classifications and/or art-recognized divergence in subject matter. Because different searches would have to be performed to examine claims directed to the inventions of any of Groups I, II, and IX-XIII, an examination of claims directed to more than one would constitute a serious burden.

Since the inventions of Groups I, II, and IX-XIII have been shown to be patentably distinct, and because the examination of more than one could not be made without serious burden, it is proper to restrict each from the other. See MPEP § 803.

6. Because these inventions are distinct for the reasons given above and also because the search required for any one group is not required for any other group and/or the inventions have acquired a separate status in the art as shown by their different classification or their recognized divergent subject matter, searching more than one invention encompassed by the claim would constitute a serious burden; therefore, restriction for examination purposes as indicated is proper.

7. This application contains claims directed to patentably distinct species of the inventions of Groups I, III, and V-XIII, wherein said CRCA-1 translation product or protein encoded by said nucleic acid has an amino acid sequence selected from the group consisting of SEQ ID NOs: 2-81.

Each species of invention is patentably distinct from the others since each member of the genus of proteins, which although encoded by a nucleic acid molecule comprising SEQ ID NO: 1, has a different amino acid sequence, which results from translation using one of the many different open reading frames contained in SEQ ID NO: 1. Accordingly, the examination of claims directed to any one species of invention would require a unique search that is not required for examination of any of the other species of invention, because the search of any one member of the genus of proteins encoded by a nucleic acid molecule comprising SEQ ID NO: 1 will not provide adequate information regarding any other. Moreover, the search necessary to examine claims directed to any one species of invention is not the same, nor is it coextensive with the search necessary to examine claims directed to any other. Since having to perform more than one search would constitute a serious burden, it is proper to restrict these species of invention and require Applicant to elect only one. See MPEP § 809.

Applicant is required under 35 U.S.C. 121 to specifically elect a single species of invention by identifying the one protein having an amino acid sequence selected from

the group consisting of SEQ ID NOs: 2-81 to which the claims of elected group of inventions will be directed during prosecution on the merits, and to which the claims shall be restricted if no generic claim is finally held to be allowable. The Examiner notes that novelty and nonobviousness of the elected species of invention would render claims directed to that species allowable over the prior art, but not necessarily over the requirements set forth under 35 U.S.C. §§ 101 and 112.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, Applicant will be entitled to consideration of claims to additional species, which are written in dependent form, or otherwise, include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

8. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions

unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. § 103(a) of the other invention.

9. The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and a product claim is subsequently found allowable, withdrawn process claims that depend from or otherwise include all the limitations of the allowable product claim will be rejoined in accordance with the provisions of MPEP § 821.04. **Process claims that depend from or otherwise include all the limitations of the patentable product** will be entered as a matter of right if the amendment is presented prior to final rejection or allowance, whichever is earlier. Amendments submitted after final rejection are governed by 37 CFR 1.116; amendments submitted after allowance are governed by 37 CFR 1.312.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103, and 112. Until an elected product claim is found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowed product claim will not be rejoined. See "Guidance on Treatment of Product and Process Claims in light of *In re Ochiai, In re Brouwer* and 35 U.S.C. § 103(b)," 1184 O.G. 86 (March 26, 1996). Additionally, in order to retain the right to rejoinder in accordance with the above policy, Applicant is advised that the process claims should be amended during prosecution either to maintain dependency on the product claims or to otherwise include the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.**

Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

10. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen L. Rawlings, Ph.D., whose telephone number is (571) 272-0836. The examiner can normally be reached on Monday-Friday, 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Helms, Ph.D. can be reached on (571) 272-0832. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stephen L. Rawlings, Ph.D.
Examiner
Art Unit 1643

slr
March 27, 2006